

Electric Vehicle Market Penetration Impact on Greenhouse Gas Emissions for Policy-Making: A Case Study of United Arab Emirates

Authors : Ahmed Kiani

Abstract : The United Arab Emirates is clearly facing a multitude of challenges in curbing its greenhouse gas emissions to meet its pre-allotted framework of Kyoto protocol and COP21 targets due to its hunger for modernization, industrialization, infrastructure growth, soaring population and oil and gas activity. In this work, we focus on the bonafide zero emission electric vehicles market penetration in the country's transport industry for emission reduction. We study the global electric vehicle market trends, the complementary battery technologies and the trends by manufacturers, emission standards across borders and prioritized advancements which will ultimately dictate the terms of future conditions for the United Arab Emirate transport industry. Based on our findings and analysis at every stage of current viability and state-of-transport-affairs, we postulate policy recommendations to local governmental entities from a supply and demand perspective covering aspects of technology, infrastructure requirements, change in power dynamics, end user incentives program, market regulators behavior and communications amongst key stakeholders.

Keywords : electric vehicles, greenhouse gas emission reductions, market analysis, policy recommendations

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